What is Claimed is:

1. A process for manufacturing an electrode for use in an energy storage device product, the process comprising the steps of:
supplying dry carbon particles;
supplying dry binder;
dry mixing the dry carbon particles and dry binder; and
dry fibrillizing the dry binder to create a matrix within which to support the dry carbon particles as a dry material.
2. The process of claim 1, wherein the step of dry fibrillizing comprises application of sufficiently high-shear.
3. The process of claim 2, wherein the high-shear is applied in a jet-mill.
4. The process of claim 2, wherein the application of sufficiently high-shear is effectuated by application of a high pressure.
5. The process of claim 4, wherein the high pressure is applied as a high pressure gas.
6. The process of claim 5, wherein the gas comprises oxygen.
7. The process of claim 5, wherein the pressure is greater than or equal to about 60 PSI.
8. The process of claim 6, wherein the gas is applied at with a water content of less than 20 ppm.

9. The process of claim 1, further comprising a step of compacting the dry material.
10. The process of claim 9, wherein the step of compacting is performed after one pass through a compacting apparatus.
11. The process of claim 10, wherein the compacting apparatus is a roll-mill.
12. The process of claim 10, wherein after the one pass though the compacting apparatus the dry material comprises a self supporting dry film.
13. The process of claim 12, wherein the self supporting dry film comprises a thickness of less than about 250 microns.
14. The process of claim 12, wherein the self supporting dry film is formed as a continuous sheet.
15. The process of claim 14, wherein the sheet is at least one meter long.
16. The process of claim 1, wherein the dry material is manufactured without the substantial use of any processing additives.
17. The process of claim 16, wherein the processing additives include: hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water, pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and Isopars^{tm}.
18. The process of claim 1, further comprising a step of calendering the dry material onto a substrate.

19. The process of claim 18, wherein the substrate comprises a collector.
20. The process of claim 19, wherein the collector comprises an aluminum foil.
21. The process of claim 18, wherein the dry material is calendered directly onto the substrate without use of an intermediate layer.
22. The process of claim 18, wherein the dry material is calendered onto a treated substrate.
23. The process of claim 1, wherein the dry binder comprises a fibrillizable flouropolymer.
24. The process of claim 1, wherein the dry material consists of the dry carbon particles and the dry binder.
25. The process of claim 1, wherein the dry material comprises between about 50% to 99% activated carbon.
26. The process of claim 1, wherein the dry material comprises between about 0% to 25% conductive carbon.
27. The process of claim 1, wherein the dry material comprises between about 0.5% to 20% fluoropolymer particles.
28. The process of claim 1, wherein the dry material comprises between about 80% to 95% activated carbon and between about 0% to 15% conductive carbon, and wherein the dry binder comprises between about 3% to 15% fluoropolymer.

29. A method of manufacturing an electrode, comprising the steps of: mixing dry carbon and dry binder particles; and forming a self-supporting film from the dry particles without the use of any processing additives.

30. The method of claim 29, wherein the processing additives include: hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water, pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and Isopars^{tm}.

31. An energy storage device product, comprising: a self supporting film comprising of a dry mix of dry carbon and dry binder particles.

32. The product of claim 31, wherein the dry mix is a dry fibrillized mix.

33. The product of claim 32, wherein the dry mix comprises substantially no processing additives.

34. The product of claim 32, wherein the processing additives are selected from a group consisting of: hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water, pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and Isopars^{tm}.

35. The product of claim 32, wherein the dry mix is dry fibrillized by application of a high pressure.

36. The product of claim 35, wherein the high pressure is applied by a dry high pressure gas.

37. The product of claim 35, wherein the high pressure is applied by air with a dew point between about –120 and –40 degrees F.

38. An energy storage device product, comprising: one or more self-supporting dry film comprising a dry fibrillized mix of dry binder and dry carbon particles.

39. The product of claim 38, wherein the self supporting dry film is compacted.

40. The product of claim 38, wherein the dry film comprises a thickness of 100 to 250 microns.

41. The product of claim 39, wherein the self supporting dry film comprises a length of at least 1 meter.

42. The product of claim 38, wherein the self supporting dry film is positioned against a substrate.

43. The product of claim 38, wherein the mix comprises between about 50% to 99% activated carbon.

44. The product of claim 38, wherein the mix comprises between about 0% to 25% conductive carbon.

45. The product of claim 38, wherein the mix comprises between about 0.5% to 20% fluoropolymer particles.

46. The product of claim 38, wherein the mix comprises between about 80% to 95% activated carbon and between about 0% to 15% conductive carbon, and wherein the dry binder comprises between about 3% to 15% fluoropolymer.

47. The product of claim 38, wherein the self supporting film comprises substantially no processing additives.

48. The product of claim 47, wherein the processing additives are selected from a group consisting of hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water, pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and Isopars^{tm}.
49. The product of claim 42, wherein the substrate comprises a collector.
50. The product of claim 49, wherein the collector comprises aluminum.
51. The product of claim 38, wherein the product comprises a collector, and wherein the dry film is positioned directly against a surface of the collector.
52. The product of claim 38, wherein the dry mix is dry fibrillized by a high-pressure gas.
53. The product of claim 51, wherein the collector comprises two sides, wherein one self supporting dry film is calendered directly against one side of the collector, and wherein a second self supporting dry film is calendered directly against a second side of the collector.
54. The product of claim 53, wherein the collector is treated.
55. The product of claim 53, wherein the collector comprises a rolled geometry.
56. The product of claim 55, wherein the roll is disposed within a sealed aluminum housing.
57. The product of claim 56, wherein within the housing is disposed an electrolyte, and wherein the product comprises a double-layer capacitor.

58. An energy storage product, comprising:
a dry fibrillized mix of dry binder and dry conductive particles formed into a continuous self supporting electrode film without the use of any processing additives.

59. The product of claim 58, wherein the processing additives are selected from a group consisting of hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water, pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and Isopars^{tm}.

60. The product of claim 58, wherein the dry conductive particles comprise conductive carbon.

61. The product of claim 58, wherein the dry conductive particles comprise a metal.

62. The product of claim 60, wherein the dry conductive carbon comprises graphite, and further comprising dry activated carbon.

63. A capacitor, comprising
a film, the film including a dry fibrillized mix of dry binder and dry carbon particles, the film coupled to a collector, the collector shaped into a roll, the roll impregnated with an electrolyte and disposed within a sealed aluminum housing.

64. The capacitor of claim 63, wherein the film comprises substantially no hydrocarbons, high boiling point solvents, antifoaming agents, surfactants, dispersion aids, water,

pyrrolidone mineral spirits, ketones, naphtha, acetates, alcohols, glycols, toluene, xylene, and/or Isopars^{tm}..

65. The capacitor of claim 63, wherein the film consists of the dry carbon particles and the dry binder.

66. The capacitor of claim 64, wherein the film is a long compacted self supporting dry film.

67. The capacitor of claim 66, wherein the film comprises a density of about .50 to .70 gm/cm^2.

68. The capacitor of claim 63, wherein when charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 120,000 cycles the capacitor experiences less than a 30 percent drop in capacitance.

69. The capacitor of claim 63, wherein when charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 70,000 cycles the capacitor experiences less than a 30 percent drop in capacitance.

70. The capacitor of claim 63, wherein when charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 70,000 cycles the capacitor experiences less than a 5 percent drop in capacitance.

71. The capacitor of claim 63, wherein the capacitor is capable of being charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 1,000,000 cycles with less than a 30% drop in capacitance.

72. The capacitor of claim 63, wherein the capacitor is capable of being charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 1,500,000 cycles with less than a 30% drop in capacitance.

73. The capacitor of claim 63, wherein when charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 70,000 cycles the capacitor experiences an increase in resistance of less than 100 percent.

74. An energy storage product, comprising:
a dry fibrillized mix of dry binder and dry conductive particles formed into a continuous self supporting electrode film without the use of any processing additives, wherein after 1 month of immersion in an acetonitrile type of electrolyte the film shows no visual damage.

75. A capacitor, comprising:
a double-layer electrode immersed in an electrolyte, wherein when charged at 100 amps to 2.5 volts and then discharged to 1.25 volts over 1,500,000 cycles the capacitor experiences less than a 30 percent drop in capacitance.
76. The capacitor of claim 75, wherein the capacitor comprises more than 1000 Farads.

77. A method of using a capacitor, comprising the steps of :
   a. charging the capacitor from 1.25 volts to 2.5 volts at 100 amps;
   b. discharging the capacitor to 1.25 volts; and
   c. measuring less than a 30% drop in an initial capacitance of the capacitor after repeating step (a.) and step (b.) 70,000 times.

78. A method of using a capacitor, comprising the steps of :

b. charging the capacitor from 1.25 volts to 2.5 volts at 100 amps;

b. discharging the capacitor to 1.25 volts; and

c. measuring less than a 5% drop in an initial capacitance of the capacitor after repeating step (a.) and step (b.) 70,000 times.

79. An energy storage device, comprising:
dry process based electrode means for providing conductive electrode functionality in an energy storage device.

80. A solventless method for manufacture of an energy storage device electrode, comprising the steps of:
providing dry carbon particles;
providing dry binder particles; and
forming the dry carbon and dry binder particles into an energy storage device electrode without the substantial use of any solvent.

81. A solventless method for manufacture of an energy storage device electrode, comprising the steps of:
providing dry carbon particles;
providing dry binder particles; and
intermixing the dry carbon and dry binder particles to form an energy storage device electrode without the use of any solvent.